

RHOPALOCERA
RECORDED IN ANDORRA
DURING 1981 AND 1983

By K. D. Z. SAMUELS, B.Sc., F.R.E.S.*

The Principality of Andorra is situated in the Pyrenees between France and Spain and can easily be reached by car from London in two days. The two-dimensional size of Andorra is only 468 square kilometres (175 square miles). However, the mountainous nature of the Principality is such that the surface area is many times this figure, with the lowest point being 838m (2750ft) and the highest point being 2942m (9652ft) above sea level. Andorra's only resident entomologist, Dr. Patrick Roche, has recorded and collected in the Principality for a number of years. Roche (1982a and 1982b) lists 134 species recorded by both himself and a number of visiting entomologists.

During my first visit to Andorra between 16.vii.81 and 21.viii.81, with fellow lepidopterist T. Wrigley, 103 species of Rhopalocera were recorded. During my second visit between 14.viii.83 and 24.viii.83, an additional two species were recorded. Of the 105 species recorded during the two visits reported here, four were previously unrecorded by Dr. Roche and a further two were new to his Andorran collection. Representatives of all six species have been deposited in his extensive reference collection of Andorran insects. This collection will form the basis for a national collection.

A total of over 40 sites ranging in size from a 100m to a 1km quadrat were worked during 1981 and 1983 covering almost all except the most inaccessible of the entomologically promising areas between 900m (2950ft) and 2400m (7875ft) above sea level. Figure 1 shows the U.T.M. grid system and allows the positions of the localities mentioned in the list of species to be located. As an example, the dark circle indicating the centre of Sant Julia de Loria is situated within the 1km grid square CH.76.03. Where a 100m grid square reference is given, this can be more accurately located on the 1:50,000 or 1:10,000 official maps of Andorra.

Unless otherwise stated, the data given in the list of species applies only to specimens recorded during the two visits in 1981 and 1983. The order followed is that of Gomez-Bustillo and Fernandez-Rubio (1974a and 1974b). The nomenclature followed is that of Higgins and Riley (1980).

The 31 species listed by Roche (1982a and 1982b) which were not recorded during the two visits reported here are given under each family in order to present a more complete list of the Rhopalocera of Andorra.

*1 Martin's Mount, Meadway, Barnet, Herts. EN5 5LQ.

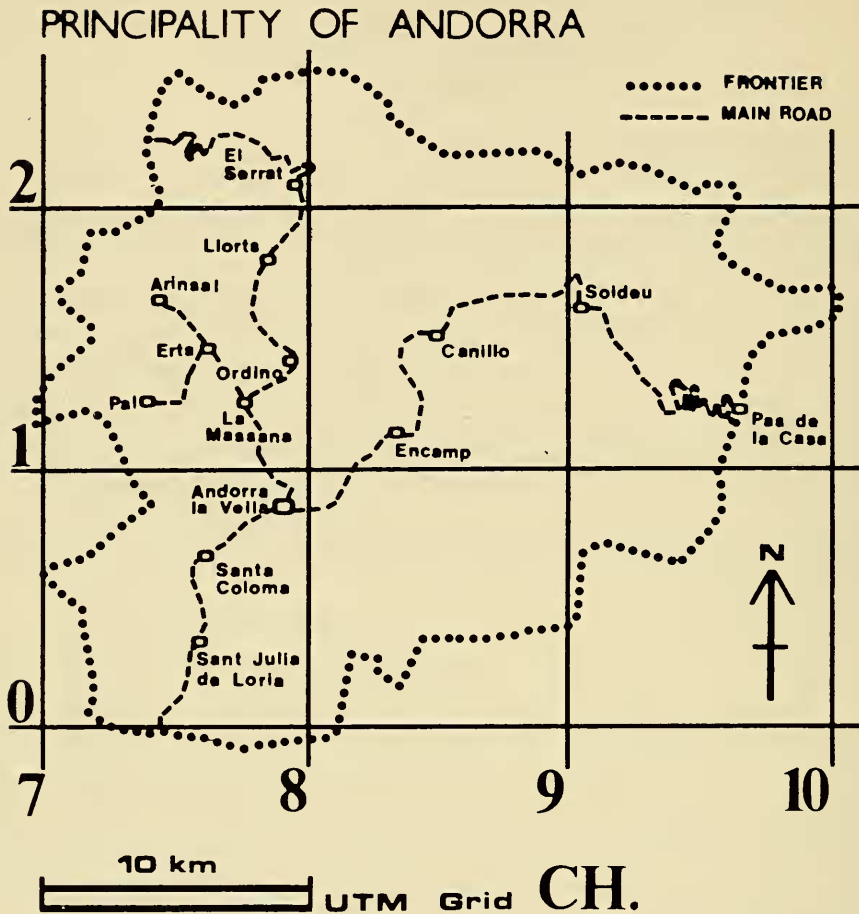


Figure 1. Main localities in Andorra.

List of species

Hesperiidae

Carcharodus alceae Esp., ssp. *australis* Zell. Recorded from Aixirivall (CH.767-8.043. 1050m) between mid-July and mid-August and from Coll de Jou (CH.74.02. 1150m) and Cortals de Sispony (CH. 76.10. 1500m) during the third week of August.

C. flocciferus Zell. Recorded from Aixirivall (CH.768.043. 1050m) on 26.vii.81.

C. lavertherae Esp. A species new to Dr. Roche's Andorran list. Two specimens recorded from Les Neres, Coll d'Ordino (CH.82.12. 2200m) on 11.viii.81.

Pyrgus carthami Hb. A species new to Dr. Roche's Andorran list. Recorded from Coll de la Botella (CH.732.130. 2070m) on 2.viii.81 and 15.viii.83, Pal (CH.744.129. 1650m) on 9.viii.81, Els Cortals (CH.87.11.2050m) on 18.viii.81 and from Cortals de Sispony (CH.76.10. 1500m) on 17.viii.83.

P. serratulae Ramb. Recorded from Fontaneda (CH.726-7.022-3. 1700m), Els Cortals (CH.87.11. 2050m), Coll de la Botella (CH.73. 13. 2100m) and La Rabassa (CH.783.003. 2050m) between late July and the third week of August.

P. alveus Hb., ssp. *accreta* Ver. Fairly common and widespread at 1050-2300m during July and August.

Spialia sertorius Hoff. Recorded from Fontaneda (CH.726-7.022-3. 1700m), Pal (CH.744.123. 1750m) and Cortals de Sispony (CH.76. 10. 1500m) between late July and the third week of August.

Thymelicus flavus Brunn., ssp. *major* Tutt. Fairly common and widespread at 1600-2000m during July and early August.

T. lineola Ochs., ssp. *ludoviciae* Mab. (?). Fairly common and widespread at 1600-2300 between late July and the third week of August.

Ochlodes venatus Brem. & Grey, ssp. *faunus* Turati. One colony recorded from Aixirivall (CH.767-8.043. 1050m) during the third week of July.

Hesperia comma L. Common and widespread at 1150-2300m between mid-July and late August.

(Additional species: *Erynnis tages* L., ssp. *brunneus* Tutt., *Pyrgus cacaliae* Ramb., *P. malvae* L., ssp. *malvoides* Elnes & Edward, *P. carlinae* Ramb., ssp. *cirsii* Ramb., *Thymelicus acteon* Rott.).

Lycaenidae

Laeosopis roboris Esp., ssp. *demissa* Ver. Recorded from Aixirivall (CH.767-8.043. 1050m) during July and August.

Nordmannia ilicis Esp. Recorded from Aixirivall (CH.767-8.043. 1050m) and Fontaneda (CH.741.024. 1290m) during July.

Thecla betulae L. Recorded from Aixirivall (CH.767-8.043. 1050m) during August.

Heodes virgaureae L. Common and widespread at 1250-2300m between mid-July and late August.

H. alciphron Rott., ssp. *gordius* Sulz. Small colonies recorded throughout S. W. Andorra at 1630-2100m between mid-July and mid-August.

H. tityrus Poda. Recorded from Fontaneda (CH.726-7.022-3. 1700m), Aixirivall (CH.767-8.043. 1050m) and Coll de Jou (CH. 74.02. 1150m) during late August.

Palaeochrysophanus hippothoe L., ssp. *mirus* Ver. Common and widespread at 1050-2000m during late July and August.

Lampides boeticus L. Two colonies recorded from Aixirivall (CH. 767-8.043. 1050m) during the third week of July and from Cortals de Sispony (CH.76.10. 1500m) during the third week of August.

Maculinea arion L., ssp. *obscura* Christ. Fairly common and widespread throughout W. Andorra at 1050-2000m between mid-July and early August.

Celastrina argiolus L., ssp. *calidogenita* Ver. Fairly common between Aixirivall and La Rabassa (CH.76-80.00-04. 1050-2050m) between mid-July and early August.

Everes alcetas Hoff. Recorded in abundance from Aixirivall (CH.767-8.043. 1050m) between late July and early August.

Cupido minimus Fuess., ssp. *noguerae* Haig-Thomas. Two specimens recorded from Coll de la Gallina (CH.72.03. 1800m) on 17.vii.81.

Plebjus argus L., ssp. *philonomus* Berg. (?). Common and widespread, especially in W. Andorra, at 1050-2250m between late July and the third week of August.

Lycaeides idas L., ssp. *saturior* Ver. Common and widespread at 1050-2300m between late July and the third week of August.

Agriades glandon de Prunner, ssp. *magnaglandon* Ver. (?). Two colonies recorded from La Rabassa (CH.783.003. 2050m) during late July and from Vall d'Incles (CH.93.18. 2000m) during mid-August.

Eumedonia eumedon Esp. One colony recorded from Vall d'Incles (CH.93.18. 2000m) on 15.viii.81. Roche (1982a) states that this species occurs in excessively localised colonies, not straying further than about two metres from its larval foodplant.

Cyaniris semiargus Rott., ssp. *montana* Mayer-Dur. Fairly common and widespread throughout W. Andorra at 1050-2300m between late July and mid-August.

Polyommatus eros Ochs. A species new to Dr. Roche's Andorran list. Two colonies recorded from Pal (CH.744.123. 1750m) on 4.viii.81 and Coll de la Botella (CH.73.13.2100m) on 15.viii.83.

P. icarus Rott. Fairly common and widespread at 1050-1700m between early and mid-August.

Agrodiaetus amanda Schneider, ssp. *pyrenaeorum* Ver. Two colonies recorded from Fontaneda (CH.726-7.022-3. 1700m) and Pal (CH. 744.123.1750m) between late July and early August.

A. escheri Hb., ssp. *rondoui* Obthr. Two colonies recorded from Fontaneda (CH.740.014. 1500m) and Aixirivall (CH.767-8.043. 1050m) during late July.

Plebicula dorylas D. & S. Fairly common and widespread at 1630-2000m during late July and August.

Lysandra coridon Poda. Abundant and widespread at 1150-2300m during July and August.

L. bellargus Rott. One colony recorded from Fontaneda (CH.740.014.1500m) during the third week of July.

Aricia agestis D. & S., ssp. *cramera* Eschscholtz. Fairly common and widespread throughout S. W. Andorra at 1700-2100m during the first two weeks of August.

A. artaxerxes F., ssp. *montensis* Ver. Fairly common and widespread throughout S. W. Andorra at 1500-1700m between late July and the third week of August.

Pseudoaricia nicias Meig., ssp. *judithi* Gomez-Bustillo. Recorded by Gomez-Bustillo and Fernandez-Rubio (1974b) as extremely rare in the Iberian Peninsula, occurring solely in Vall d'Aran, E. Pyrenees. One very localised colony was recorded from Vall d'Incles (CH.930.185. 1925m) on 15-18.viii.81 and 21.viii.83 within an area of only 5m². A second colony was recorded from Segudet (CH.80.13. 1500m) on 18.viii.83.

(Additional species: *Quercusia quercus* L., *Callophrys rubi* L., ssp. *virgatus* Ver., *Strymonidia spini* D. & S., ssp. *bofilli* Sagarra., *S.w-album* Knoch., *Nordmannia acaciae* F., *N. esculi* Hb., *Lycaena phlaeas* L., *Glaucopsyche alexis* Poda., *Maculineaalcon* D. & S., *Everes argiades* Pallas., *Agrodiaetus thersites* Cantener.)

Satyridae

Pararge aegeria L. One colony recorded from Coll.de Jou (CH.74.02. 1150m) during late August.

Lasiommata megera L. Fairly common and widespread throughout S. W. Andorra at 1050-2050m between mid-July and late August.

L. maera L., ssp. *adrasta* Hb. Fairly common and widespread throughout W. Andorra at 1050-1800m between late July and the third week of August.

Coenonympha arcania L. Abundant and widespread throughout W. Andorra at 1050-2050m between mid-July and mid-August.

C.dorus Esp. Three colonies recorded from Aixirivall (CH.767-8.043. 1050m), Fontaneda (CH.726-7.022-3. 1700m) and La Rabassa (CH.783.003. 2050m) between mid- and late July.

C. pamphilus L. Fairly common and widespread throughout W. Andorra at 1050-2050m between late July and mid-August.

Melanargia galathea L., ssp. *lachesis* Hb. Common and widespread throughout W. Andorra at 1050-1500m between mid- and late July.

M. russiae Esp., ssp. *centralis* Sagarra. Fairly common and widespread throughout S. W. Andorra at 1050-1700m between mid- and late July.

Hipparchia alcyone D. & S. Common and widespread throughout W. Andorra at 1050-2050m between late July and mid-August.

H. semele L., ssp. *cadmus* Fruh. A single specimen recorded from Aixirivall (CH.767-8.043. 1050m) on 29.vii.81.

Neohipparchia statilinus Hufn. One colony recorded from Aixirivall (CH. 767-8.043. 1050m) during the third week of August.

Brintesia circe F. Two large colonies recorded from Aixirivall (CH. 767-8.043. 1050m) and Coll de Jou (CH.755.030. 1050m) between mid- and late July.

Satyrus actaea Esp. Common and widespread throughout W. Andorra at 1050-2000m between mid-July and mid-August.

Chazara briseis L. Fairly common and widespread throughout W. Andorra at 1050-1700m during the third week of August.

Pyronia tithonus L. Fairly common and widespread throughout S. W. Andorra at 1050-2050m between late July and early August.

Maniola jurtina L. Common and widespread throughout S. W. Andorra at 1050-1700m between late July and the third week of August.

Erebia euryale Esp., ssp. *pyraenaicola* Golz. Fairly common and widespread at 2000-2050m during August.

E. epiphron Knoch, ssp. *fauveauti* de Lesse. Abundant and widespread at 1700-2200m between mid-July and the third week of August

E. triaria de Prunner, ssp. *evias* Godart. A single specimen recorded from Vall d'Incles (CH.93.18. 2000m) on 15.viii.81.

E. gorgone Boisd. Two colonies recorded from Coma del Forat (CH.753.222. 2200m) and Vall d'Incles (CH.93.18. 2000m) between early and mid-August.

E. cassioides Hochenworth, ssp. *arvernensis* Obthr. Abundant and widespread at 1790-2100m between the third week of July and late August.

E. lefebvrei Boisd. A species new to Dr. Roche's Andorran list. A single specimen recorded from Pont de la Coma (CH.744.123. 1750m) on 4.viii.81.

E. neoridas Boisd. Talbot (1928) collected a series of males from "Soldeu to Andorra-la-Viella, valley of the Valira del Oriente, 3000-5000ft, 21.viii.26" and from "Las Escaldas to Encamp, 3000-4000ft, 3.ix.26". However, there are no further Andorran records of this species in the literature. Two males were recorded from Fontaneda (CH.726-7.022-3. 1700m) on 19.viii.81. During the 1983 visit this species was the commonest *Erebia*, with males and females being recorded from Anyos (CH.80.11. 1600m), La Gonarda (CH. 79.13. 1350m), Cortals de Sispony (CH.76.10. 1500m) and Coll de la Gallina (CH.72.03. 1800m).

E. meolans de Prunner, ssp. *pyrenaica* Ruhl. Abundant and widespread at 1250-2050m between the third week of July and late August.

(Additional species: *Hipparchia fagi* Scopoli., *Hyponephele lycaon* Kuehn., *Erebia hispania* Butler., *E. oeme* Hb., ssp. *podia* Staud., *E. pandrose* Borkhausen. Also **Nemeobiidae**: *Hamearis lucina* L.)

Libytheidae

Libythea celtis Laicharting. One colony recorded from Aixirivall (CH.767.043. 1050m) on 19-26.vii.81. The adults remained on the larval foodplant, *Celtis australis* L., unless disturbed, in which case they quickly returned. Also recorded only from this site during 1983.

Nymphalidae

Apatura ilia D. & S., ssp. *barcina* Ver. A single specimen f. *clytie* D. & S. recorded from Aixirivall (CH.768.043. 1050m) on 13.viii.81.

Limenitis camilla L. A single specimen recorded from Fontaneda (CH.741.024. 1290m) on 17.vii.81.

L. reducta Stdgr., ssp. *herculeana* Tichell. A single specimen recorded from Fontaneda (CH.741.024. 1290m) on 17.vii.81.

Vanessa atalanta L. One colony recorded from Aixirivall (CH.767-8.043. 1050m) during the third week of July.

Cynthia cardui L. Common and fairly widespread at 1050-2000m between early and mid-August.

Inachis io L. Fairly common and widespread at 1050-1500m during July and August.

Aglais urticae L. common and widespread at 1470-2050m during July and August.

Nymphalis antiopa L. A single specimen recorded from Vall d'Incles (CH. 915.183. 1800m) on 18.viii.81.

Polygonia c-album L. One colony recorded from Aixirivall (CH. 767-8.043. 1050m) between late July and mid-August.

Melictha deione Geyer. Two colonies recorded from Coll de la Botella (CH.732.130. 2050m) and Aixirivall (CH.767-8.043. 1050m) during August.

M. athalia Rott., ssp. *aguilari* Sagarra. Abundant and widespread throughout W. Andorra at 1050-2050m between mid-July and mid-August.

M.parthenoides Keferstein. Three colonies recorded from Coll de la Botella (CH.732.130. 2050m), Fontaneda (CH.726-7.022-3. 1700m) and Pal (CH.74.12. 1600m) between late July and mid-August.

Melitaea didyma Esp., ssp. near *meridionalis* Stdgr. Abundant and widespread at 1050-2050m between mid-July and mid-August.

M. phoebe D. & S. Two colonies recorded from Aixirivall (CH.767-8.043. 1050m) and Fontaneda (CH.726-7.022-3. 1700m) between mid-July and late August.

Boloria pales D. & S., ssp. *pyrenesmiscens* Ver. Fairly common and widespread at 1630-2050m between late July and mid-August.

B.napaea Hoff. Common and fairly widespread at 1750-2050m between mid-July and early August.

Clossiana selene D. & S. A single specimen recorded from La Rabassa (CH.783.003. 2050m) on 29.vii.81.

C.euphrosyne L. Common and fairly widespread at 1050-2200m between late July and mid-August.

C. dia L., ssp. *laectior* Ver. One fairly large colony recorded from Aixirivall (CH.767-8.043. 1050m) between mid- and late July.

Brenthis daphne D. & S. One colony recorded from Aixirivall (CH.767-8.043. 1050m) between mid- and late July.

B. ino Rott. Two colonies recorded from Pal (CH.744.123. 1750m) and Pal (CH.744.129. 1630m) during early August.

Issoria lathonia L. Common and widespread throughout S. W. Andorra at 1050-1700m between late July and the third week of August.

Fabriciana adippe D. & S. Fairly common and widespread throughout S. W. Andorra at 1050-1700m between the third week of July and the third week of August.

Mesoacidalia aglaja L. Abundant and widespread throughout W. Andorra at 1050-2050m between the third week of July and the third week of August.

Argynnis paphia L. Two colonies recorded from Aixirivall (CH. 767-8.043. 1050m) and Segudet (CH.80.13. 1500m) between the third week of July and the third week of August.

(Additional species: *Nymphalis polychloros* L., *Eurodryas aurinia* Rott., ssp. *debilis* Obthr., *Melitaea cinxia* L., *M. diamina* Lang., ssp. *vernetensis* Obthr., *Proclassiana eunomia* Esp., *Fabriciana niobe* L.)

Pieridae

Leptidea sinapis L. Common and fairly widespread at 1050-2050m between late July and the third week of August.

Aporia crataegi L. Common and fairly widespread throughout W. Andorra at 1050-2050m between the third week of July and early August.

Pieris brassicae L. Fairly common and widespread throughout S. W. Andorra at 1050-1700m between late July and late August.

Artogeia rapae L. Abundant and widespread at 1050-1800m between mid-July and the third week of August.

A. napi L. Abundant and widespread at 1050-1600m between mid-July and mid-August.

Pontia daplidice Hb. Two colonies recorded from Aixirivall (CH.767-8.043. 1050m) and Cortals de Sispony (CH.76.10. 1500m) between late July and the third week of August.

P. callidice Hb. Three colonies recorded from Coma del Forat (CH.753.222. 2200m) on 8.viii.81, Port d'Envalira (CH.94.12. 2400m) on 20.viii.81 and Coll de la Botella (CH.73.12. 2100m) on 15.viii.83.

Anthocharis cardamines L. A single specimen recorded from Aixirivall (CH.768.043. 1050m) on 27.vii.81.

Colias hyale L. A single specimen recorded from Coll de Jou (CH.74.02. 1150m) on 22.viii.83.

C. australis Ver. Recorded by Roche (1982b) as being common and widespread. However, only three specimens were recorded, from Fontaneda (CH.740.014. 1500m) on 21.vii.81, Fontaneda (CH.726-7.022-3. 1700m) on 29.vii.81 and Coll de Jou (CH.74.02. 1150m) on 22.viii.83.

C. phicomone Esp., ssp. *oberthuri* Ver. One very large colony recorded from La Rabassa (CH.783.003. 2050m) during late July. Smaller colonies recorded from Port de Cabus (CH.704.128. 2300m) and Vall d'Incles (CH.93.18. 2000m) between early and mid-August.

C. crocea Geoffr. Very common and widespread at 1050-2100m between the third week of July and the third week of August. However, only two specimens of the female-form *helice* Hb. were recorded, from Cortals de Sispony (CH.76.10.) on 10.viii.81 at 1600m and on 7.viii.83 at 1500m. Higgins and Riley (1980) state that the white female-form *heliceis* genetically controlled and behaves as a dominant to the common yellow form, in a balanced polymorphism with a ratio of about 10% in most populations. It is interesting to note that although the yellow form is very common and widespread an Andorran female-form *helice* has only been reported on one previous occasion, again from Cortals de Sispony (Gossling, 1980-81).

Gonepteryx rhamni L. Common and widespread at 1050-2100m between late July and late August.

G. cleopatra L., ssp. *europaea* Ver. A single specimen recorded from Aixirivall (CH.768.043. 1050m) on 27.vii.81.

(Additional Species: *Euchloe ausonia* Hb., ssp. *simplonia* Frey., *Anthocharis belia* L., ssp. *euphenoides* Staud.)

Papilionidae

Papilio machaon L., ssp. *hispanicus* Eller. Two colonies recorded from La Rabassa (CH.783.003. 2050m) and Fontaneda (CH.74.01. 1450m) between late July and the third week of August.

Iphiclides podalirius L., ssp. *feisthamelii* Duponchel. Two colonies recorded from Fontaneda (CH.739.017. 1470m) and Aixirivall (CH.767.043. 1050m) between late July and early August.

Parnassius apollo L., ssp. *pyrenaicus* Hardcourt-Bath. Abundant and widespread at 1500-2000m between the third week of July and mid-August.

(Additional Species: *Zerynthia rumina* L.)

Postscript

During November 1982 Andorra was subjected to relentless rain, causing sudden and severe flooding. Some bridges and many stretches of road just vanished, houses and other buildings on river banks were partially or totally washed away and cars were swept away and overturned. The press reported 14 dead and 15 missing. There is no doubt that the Rhopalocera, like the rest of the flora and fauna, suffered. Many habitats literally disappeared overnight.

In spite of this Andorra still remains an entomologically rich area that has been largely overlooked by lepidopterists, particularly at the more remote peaks and valleys. It is likely that the exploration of these sites will reveal a few more species of Rhopalocera to add to the Andorran list.

Acknowledgements

I wish to thank the Worshipful Company of Haberdashers' for the award of the Northcott Travelling Scholarship which enabled me to undertake the 1981 visit. I also thank Tim Wrigley for his assistance and especially Patrick Roche for very many hours of his time.

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LYMANTRIA DISPAR LINN IN DORSET – a fine male of this species turned up in my garden m.v. trap on the night of 29th August 1985. This was a warm night with a southerly wind and the only night this August when the trap count passed the 100 mark! E. H. WILD, 7 Abbots Close, Highcliffe, Christchurch, Dorset.

PARAGE AEGERIA L. (SPECKLED WOOD) IN FIFE – On 6th October 1984, Dr. M. P. Harris was very fortunate to see a single speckled wood butterfly on the Isle of May. Not only is this the first record for this National Nature Reserve, but is also the first record for Fife this century, the only previous record being from Aberdour in 1890 (Thompson, G. *The Butterflies of Scotland*). Although there were colonies around Perth and in the Borders earlier this century these are now extinct (Heath, J., Pollard, E. and Thomas, J. 1984 *Atlas of Butterflies in Britain and Ireland*). The nearest known colonies are on the Moray/Loch Ness area on the west coast of Scotland. To the south there appear to be only isolated sites in north-east England. It would be interesting to know of any other sightings of this species away from regular haunts. P. K. KINNEAR, Nature Conservancy Council, 11 Hillview Road, Balmullo, St. Andrews, Fife.

[We hope shortly to publish a paper on the extension of the range of *aegeria* in north-east Scotland. – Ed.]